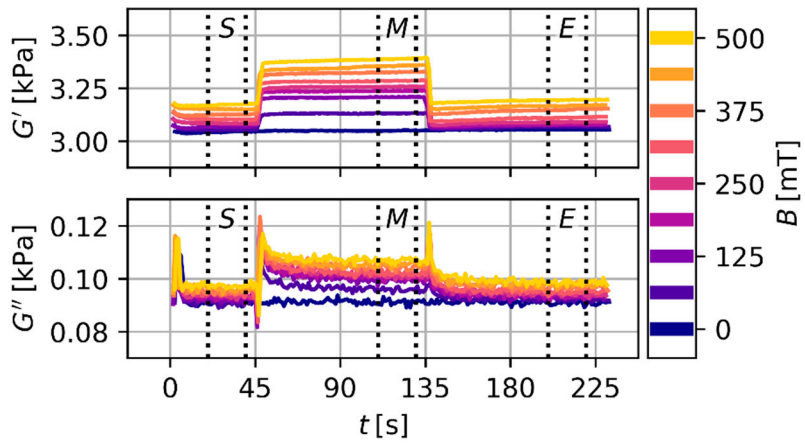
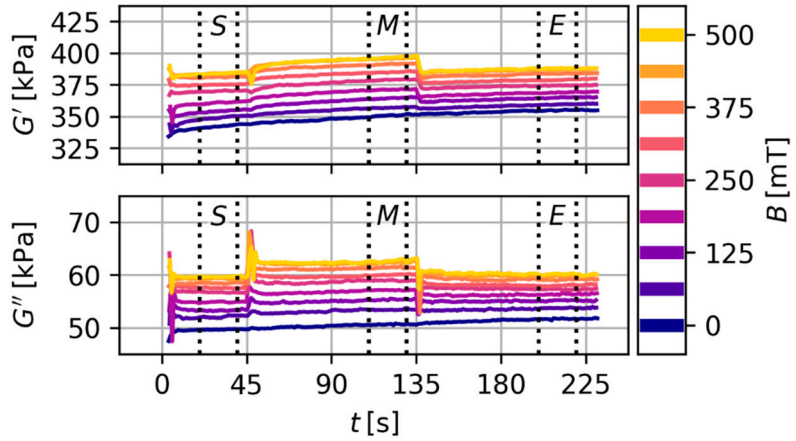
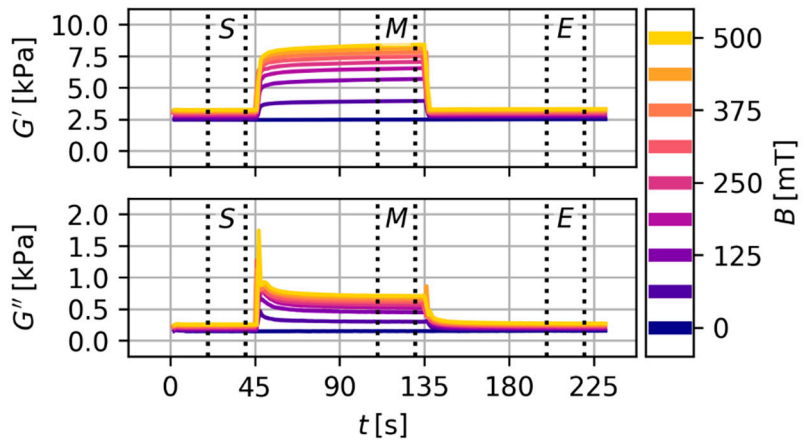


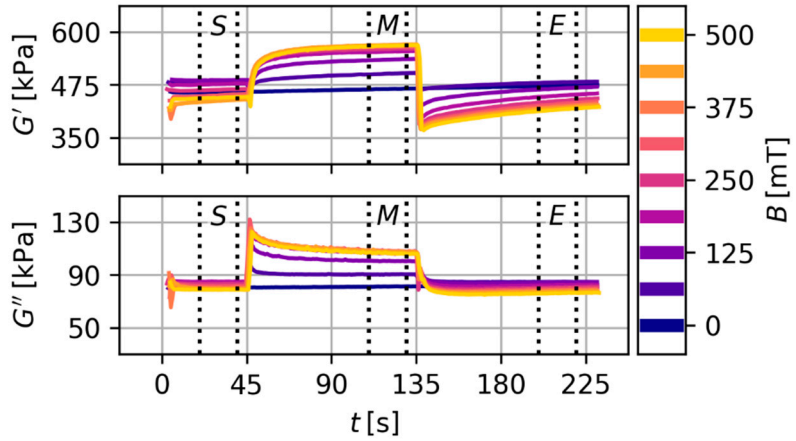
Supplementary Figure S1: Storage and loss modulus over time. The magnetic field is activated at t = 45 s and deactivated at t = 135 s. Measurements are conducted successively with increasing magnetic flux density for a single sample. w_s = 10 % and T = 20 °C



Supplementary Figure S2: Storage and loss modulus over time. The magnetic field is activated at t = 45 s and deactivated at t = 135 s. Measurements are conducted successively with increasing magnetic flux density for a single sample. w_s = 10 % and T = 40 °C



Supplementary Figure S3: Storage and loss modulus over time. The magnetic field is activated at t = 45 s and deactivated at t = 135 s. Measurements are conducted successively with increasing magnetic flux density for a single sample. w_s = 60 % and T = 20 °C



Supplementary Figure S4: Storage and loss modulus over time. The magnetic field is activated at t = 45 s and deactivated at t = 135 s. Measurements are conducted successively with increasing magnetic flux density for a single sample. w_s = 60 % and T = 40 °C. Only this combination of w_s and T shows a decrease of G' after the deactivation of the magnetic field. The reason for this different behavior is yet unknown.